

# **CHAPTER I**

## **INTRODUCTION**

### **1.1 Background of the Problem**

Ranch is an activity to breed and cultivate farm animals to get the benefits and results of those activities. The purpose of ranch is to seek for profit with the application of the principal managements on production factors combined optimally (Rasyaf, 1994).

Dairy cattle farm is one type of ranch business which attempts to produce dairy farm milk. Dairy cow is an animal farm which very dominant than any other animal and is having business prospect that must be utilized so that there is no dependence toward imported cattle. Dairy cow milk must be able to be produced maximally because of its nutrient content and potentially be further processed into other product as value-added.

Boyolali is one of cities that have an opportunity to take advantage of that wealthy source. It is the location is on a plateau near the Merapi Mountain that is very appropriate for dairy farm breeding to obtain the highest milk production of dairy farm milk. Production of dairy farm milk in Boyolali ranges 41588.25 kg / month. Therefore, Boyolali is often called as "City of Milk" as one of the largest of dairy cattle in Central Java.

Boyolali as the City of Milk should be able to utilize the natural potential in order to introduce the mascot of "Sapi" to the audience in accordance to the development of information technology that increasingly advanced. Boyolali's potent that is very beautiful must be recognized by society. Producing areas of dairy cattle is

not only known by the Boyolali natives but also can be accessed by the public generally.

Boyolali regency consists of 19 districts, 267 villages with several KUD and this is where the milk production of dairy cattle developed. However, the high quality milk-producing dairy cow at an affordable price along with the flow distribution of milk to be processed into value-added is not so popular among people and opportunities to cultivate dairy cattle for entrepreneurs to find an appropriate location that. Requirement to obtain information about the dairy town obtained by the public was minimal.

Therefore, it needs a data processing system to present information about dairy cattle Boyolali precisely, accurately and efficiently. Geographical information system is one of tool that can be used to obtain information that supports those needs. Using the Geographical information system, it allow to display following information:

1. Information about the general idea of a dairy, quality, production, pricing, benefits dairy cattle, dairy cow milk content, the potential on the variety of Boyolali's dairy products.
2. Location Boyolali's dairy cattle.
3. Using a web-based geographical information system is expected to provide useful information for people with an elegant look and ease of access for mapping areas surrounding the dairy farm production and goods Boyolali derivatives

## **1.2 Problem Formulation**

Formulation of the problem raised by the background of this study is "How to create mapping dairy cattle breeding areas in Boyolali Using WebGIS?"

### **1.3 Scope of Problem**

Boundary problem is used to facilitate the research to make it more detailed.

1. How to find the dairy cattle producing areas in Boyolali?
2. How is the data processing of dairy cattle in Boyolali?
3. How to update the information relating to dairy cattle Boyolali?

### **1.4 Research Purposes**

The purpose of this research is to create a web-based GIS application that allows people to know the area of dairy farm in Boyolali.

### **1.5 Benefits of Research**

The benefits of this research are as follow:

1. For Milk Producers

This application can be used as a means of showing the results of dairy cattle production to the audience to be consumed or processed into other products as well as to promote one of the flagship products of the region

2. For Developers

The benefits of the developer is to know the location of dairy cattle that produce milk to be used as an attempt to seek the highest milk producing regions in affordable prices and with the best quality goods to be developed into derivatives or directly taken to the milk processing plant even also may be sold directly to the public.

3. For Researchers

The benefit for the researchers is to be able to implement the knowledge that has been learned in lectures, especially HTML, My SQL and Quantum GIS

## **1.6 Systematical of writing**

Systematic of writing is made to facilitate the preparation of this paper. It can determine the good systematic of writing.

Systematic writing is as follows:

CHAPTER I INTRODUCTION. It is to describe the background of the problem, formulation of the problem, problem definition, objectives, benefits and systematic of writing.

CHAPTER II LITERARY REVIEW. It contains about the theories, design and manufacture of the system used in the study.

CHAPTER III RESEARCH METHOD. In this chapter the authors propose a method of research conducted in the design and implementation of geographical information systems. Research methods include the time and place, the main equipment and supporting research flow charts.

CHAPTER IV RESULT AND DISCUSSION. This chapter describes the results of stages, ranging from analysis, design, testing and implementation results of the research.

CHAPTER V CLOSING. This chapter contains conclusions and suggestions of all the research that has been conducted.